

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) An apparatus comprising:
 - a lens adapted for impantation in an eye of a human patient, the lens having an index of refraction that varies in response to a focusing stimulus;
 - an actuator in communication with said lens for providing said focusing stimulus;
 - a rangefinder for generating, from a range estimate, a relative distance to an object-of-regard; and
 - a controller coupled to said rangefinder and to said actuator for causing said actuator to generate a focusing stimulus on the basis of said range estimate.
2. (Cancelled)
3. (Currently Amended) The apparatus of claim ~~[[2]]~~1, wherein said lens is adapted for implantation at a location in an eye, said location being selected from the group consisting of:
 - the anterior chamber;
 - the posterior chamber;

the lens bag; and

the cornea.

4. (Currently Amended) The apparatus of claim ~~[[2]]~~1, wherein said lens is adapted for implantation in an aphakic human patient.
5. (Currently Amended) The apparatus of claim ~~[[2]]~~1, wherein said lens is adapted for implantation in a phakic human patient.
6. (Original) The apparatus of claim 1, wherein said lens is a foldable lens having a tendency to spring back into an unfolded state.
7. (Original) The apparatus of claim 1, wherein said lens comprises a chamber containing nematic liquid crystal.
8. (Original) The apparatus of claim 7, wherein said chamber comprises a first planar side and a second planar side opposed to said first planar side, said first and second planar sides being separated by a gap smaller than a separation between a lens bag in an eye and an iris in said eye.
9. (Cancelled)
10. (Original) The apparatus of claim 1, wherein said actuator comprises a variable voltage source.
11. (Original) The apparatus of claim 10, wherein said actuator further comprises an electrode coupled to said variable voltage source and to said lens for applying an electric field within said lens.
12. (Cancelled)
13. (Cancelled)

14. (Original) The apparatus of claim 1, wherein said actuator comprises a plurality of actuating elements coupled to different local regions of said lens for selectively varying said index of refraction at said different local regions of said lens.
15. (Original) The apparatus of claim 14, wherein each of said local regions of said lens has a local curvature.
16. (Original) The apparatus of claim 14, wherein said actuating elements comprise a plurality of electrodes disposed at different portions of said lens.
17. (Cancelled)
18. (Cancelled)
19. (Cancelled)
20. (Cancelled)
21. (Cancelled)
22. (Currently Amended) ~~[[The]]~~ An apparatus comprising: ~~[[of claim 1, wherein]]~~

a lens having an index of refraction that varies in response to a focusing stimulus;

an actuator in communication with said lens for providing said focusing stimulus;

a rangefinder for generating, from a range estimate, a relative distance to an object-of-regard, said rangefinder ~~[[comprises]]~~ including a transducer for detecting a stimulus from an anatomic structure in an eye, said stimulus being indicative of a range to said object-of-regard; and

a controller coupled to said rangefinder and to said actuator for causing said actuator to generate a focusing stimulus on the basis of said range estimate.

23. (Currently Amended) The apparatus of claim 22, wherein said transducer ~~[[is]]~~comprises a pressure transducer for detecting contraction of a muscle.
24. (Currently Amended) The apparatus of claim 23, wherein said pressure transducer ~~[[is]]~~comprises a piezoelectric element that generates a voltage in response to contraction of said muscle.
25. (Cancelled)
26. (Cancelled)
27. (Original) The apparatus of claim 1, wherein said rangefinder comprises an autofocus system.
28. (Original) The apparatus of claim 27, wherein said autofocus system comprises:
- an infrared transmitter for illuminating an object with an infrared beam;
- an infrared receiver for receiving a reflected beam from said object, and
- a processor coupled to said infrared receiver for estimating a range to said object on the basis of said reflected beam.
29. (Original) The apparatus of claim 27, wherein said rangefinder further comprises a feedback loop coupled to said autofocus system.
30. (Cancelled)
31. (Original) The apparatus of claim 1, further comprising a manual focusing control for enabling a patient to fine tune focusing of said lens.

Applicant : Dimitri Azar
Serial No. :
Filed : July 25, 2003
Page : 7 of 8

Attorney's Docket No.: 00633-030002

32. (Cancelled)

33. (Cancelled)

34. (Cancelled)

35. (Cancelled)

36. (Cancelled)

37. (Cancelled)

38. (Cancelled)

39. (Cancelled)

40. (Cancelled)

41. (Cancelled)

42. (Cancelled)

43. (Cancelled)

44. (Cancelled)

45. (Cancelled)

46. (Cancelled)

47. (Cancelled)